IN THE CLAIMS:

Please amend the claims to read as follows:

- -- 1-13 (cancelled).
 - 14. (currently amended) A nanocomposite comprising:
 - a diamagnetic core;
 - a thin layer of magnetic material formed on the diamagnetic core;
 - a passivating layer of diamagnetic material formed on the layer of magnetic material.
 - 15. (original) The nanocomposite of claim 14, wherein:

the diamagnetic core is a material from the group consisting of gold, silver, copper, and platinum;

the magnetic material is a material from the group consisting of iron and cobalt and alloys containing iron and/or cobalt;

the passivating layer is a material from the group consisting of gold, silver, platinum, and copper, and alloys containing these materials.

- 16. (previously amended) The nanocomposite of claim 14, comprising:
- a gold core;
- a thin layer of iron formed on the gold core;
- a passivating layer of gold on the layer of iron.
- 17. (previously amended) The nanocomposite of claim 14, produced with a reverse micelle synthesis technique.
- 18. (previously amended) The nanocomposite of claim 14, synthesized using cetyltrimethylammonium bromide, n-butanol, octane and aqueous reactants.
 - 19. (previously amended) Ferrofluids made with the nanocomposite of claim 14.
 - 20. (previously amended) Granular GMR materials made with the nanocomposite of

claim 14.

- 21. (previously amended) Inductor materials made with the nanocomposite of claim 14.
 - 22. (previously amended) Storage media made with the nanocomposite of claim 14.
- 23. (previously amended) Giant magnetoresistance sensors made with the nanocomposite of claim 14.
- 24. (previously amended) Directed drug delivery agents made with the nanocomposite of claim 14.
- 25. (previously amended) Agents for targeted sensing for *in vivo* applications made with the nanocomposite of claim 14.
 - 26. (original) The nanocomposite of claim 14, wherein:

the diamagnetic core is a material from the group consisting of gold, silver, copper, and platinum;

the magnetic material is a material from the group consisting of iron and cobalt and platinum alloys containing iron and/or cobalt;

the passivating layer is a material from the group consisting of gold, silver, platinum, and copper, and alloys containing these materials.

- 27. (currently amended) The invention nanocomposite of claim 14, wherein the nanocomposite is annealed.
- 28. (currently amended) The invention nanocomposite of claim 27, wherein the nanocomposite is annealed at a temperature of about 300 K.
 - 29. (cancelled).
 - 30. (new) The nanocomposite of claim 14, wherein:

the layer of magnetic material is thin.

31. (new) The nanocomposite of claim 15, wherein:

the layer of magnetic material is thin.

32. (new) The nanocomposite of claim 16, wherein:

the layer of magnetic material is thin.

33. (new) The nanocomposite of claim 17, wherein:

the layer of magnetic material is thin.

34. (new) The nanocomposite of claim 18, wherein:

the layer of magnetic material is thin.

35. (new) The ferrofluids of claim 19, wherein:

the layer of magnetic material is thin.

36. (new) The granular GMR materials of claim 20, wherein:

the layer of magnetic material is thin.

37. (new) The inductor materials of claim 21, wherein:

the layer of magnetic material is thin.

38. (new) The storage media of claim 22, wherein:

the layer of magnetic material is thin.

39. (new) The giant magnetoresistance sensors of claim 23, wherein:

the layer of magnetic material is thin.

40. (new) The directed drug delivery agents of claim 24, wherein:

the layer of magnetic material is thin.

41. (new) The agents of claim 25, wherein:

the layer of magnetic material is thin.

42. (new) The nanocomposite of claim 26, wherein:

the layer of magnetic material is thin.

43. (new) The nanocomposite of claim 27, wherein:

the layer of magnetic material is thin.

44. (new) The nanocomposite of claim 28, wherein:

the layer of magnetic material is thin.